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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/587,962

07/31/2006

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EXAMINER

BELL, BRUCE F

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

06/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/587,962	Applicant(s) OLDANI ET AL.	
	Examiner Bruce F. Bell	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/31/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 is vague and indefinite with respect to the phrase "in at least 4 places, two upper and two lower points". The phrase is unclear as to whether applicant means 4 places or whether they mean fixed at 2 upper and 2 lower points.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3-11 are rejected under 35 U.S.C. 102(b) as being anticipate by Cox (5282934).

Cox disclose an apparatus and method for recovering metals from solution using electrolytic cells. See abstract. The patent shows an anode and cathode assembly which are alternated with one another when assembled in the cell. The anode assembly comprises a set of anode plates 102, 102', 102'' that are composed of graphite or any other conductive material known in the art. Each of the anode plates is suspended from

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a corresponding anode plate hanger bar 106, 106', 106'' that is composed of nickel plated copper or other corrosion resistant conductive material. See col. 8, lines 43-65.

The anode plate hanger bars are inserted into notches on a plate hanger support 110, 110' and each anode plate hanger is electrically connected to an anode bus bar 114.

Each anode plate hanger is bent at a right angle and pierced with a bolt hole.

Corresponding holes 115, 115' are drilled in anode bus bar 114 permitting electrically conductive anode nut/bolt combinations 117, 117' to securely fasten bus bar 114 to the anode plate hangers. See col. 9, lines 1-20. The cathode assembly comprises two sets of stainless steel cathode plates 122, 122' securely and electrically connected to cathode plate hangers 126, 126', using nut/bolt assembly 128, 128'. The cathode plates are attached to each cathode plate hanger. The cathode plate hangers are of extended length to allow their ends to rest into the insulated notches of the plate hanger supports 110, 110'. Electrically conductive cathode bush bar 130 is electrically connected to the cathode plate hangers. See col. 9, lines 21-43. Taken together the positional relationship between anode assembly 100 and cathode assembly 120 is shown in figures 5-7. The anode bus bar is at the left end of the anode assembly 100, while the cathode bus bar 130 is attached to the opposite right end of the cathode plate hangers. These positional relationships allow the cathode plates to be inserted between the anode plates of the anode assembly such that the two cathode plates are sandwiched between the three anode plates. When so parallelly inter-positioned, the electrode assemblies can be set into their correspond support notches in the plate hanger supports. See col. 9, lines 44-65. Once assembled, the alternating anode/cathode plate

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assembly is lowered into cell chamber 48 and is suspended therein,. Support for the electrode assembly is provided by removably disposing the ends of the anode plate hangers and cathode plate hangers into corresponding notches in the plat hanger supports, mounted on cell top 54. The plate tracks 158 on floor 92 provide positional guidance and support for the bottom edges of the electrode assembly 152. See col. 9, line 66 – col. 10, line 11.

The prior art of Cox anticipates the applicants instant invention as shown by way of the disclosure above with respect to the instant claims as presented. With respect to claim 4, the prior art of Cox sets forth that other conductive materials known in the art may be used in place of the graphite and these types of cells are known to inherently be able to use valve metals, therefore this aspect of the invention is anticipated. With respect to claim 5 since it is unclear as to whether the anodes are fixed in at least four points or whether they have to be two higher or two lower, and therefore, the examiner is construing this claim to read as if the anodes are fixed at four points and therefore, the three anodes each being fixed to the anode hanger bar yields six points and therefore, meets the instant claim. With respect to the anode rack having insulating guides, the examiner construes the completed assembly having the insulated notches 110 into which the anode and cathodes are hung by the anode hanger bar and the cathode hanger bar to be a part of the completed assembly and therefore the insulated notches anticipate the applicants instant claim. With respect to the external containing basin, it appears that the cell container 42 meets this aspect of the instant claim. With respect to the containing side walls fixed to the anode rack appears to be inherently met

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by the cell container being enclosed by the cell chamber 48. The term fixed is being construed by the examiner to mean that it is contained within. Therefore, the prior art of Cox anticipates the applicants instant invention as shown by way of the disclosure above.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox (5282934) in combination with FR 2835248 ('248).

Cox is as disclosed above in the 35 USC 102(b) rejection.

Cox does not disclose a lower feed manifold and an upper electrolyte outlet feed nor a water softening process for microelectrolysis of waters containing calcium and/or magnesium carbonate.

FR '248 disclose a method of reducing the concentration of certain metals in the composition of water. The method consists in carrying out microelectrolysis of water that makes up the electrolyte. The device for carrying out the method comprises a reactor where the water to be treated arrives in the lower part, the treated water is recovered in part and the carbonate and calcium and iron oxide are recovered at the base. See abstract. The French patent discloses that the anodes are parallel to that of the cathodes and that the water is feed to the bottom of the cell and is treated and

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recovered at the upper part of the cell. The cathode plates are removed from the cell and the deposited materials are recovered from the cathode plates through conventional electro winning processes. See FR'248 document.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the instant invention was made because even though the prior art of Cox does not disclose a water softening process or a cell having a lower feed manifold and upper electrolyte outlet feed, the prior art of FR'248 shows that cells with alternating anode and cathode plates are known to be used in the process of softening water, wherein the constituents are plated out on the cathode and the material is subsequently removed when needed. Further the prior art of FR'248 shows that it is known to feed the electrolyte to the bottom of such a cell and to remove the purified (softened) water out the top of the cell. Therefore, the prior art of Cox in combination with FR '248 renders the applicant instant invention as obvious for the reasons set forth above.

Applicant is reminded that if they do not agree with what the FR '248 document says, that the examiner will require a certified English translation of this document to over come the rejection, since applicants supplied the document and it is in French with the exception of the abstract. The examiner has tried to translate to the best of his abilities by site, but may be incorrect with respect to what the document say due to years of non use in speaking and/or translating.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bruce F. Bell whose telephone number is 571-272-1296. The examiner can normally be reached on Monday-Friday 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BFB
June 22, 2008

/Bruce F. Bell/
Primary Examiner, Art Unit 1795